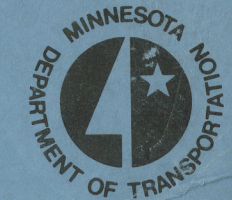




466



Transportation Analysis

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1978a

State of Minnesota
Department of Transportation
Bureau of Policy and Planning

DEPARTMENT Mn/DOT - Transportation Analysis
Room 813

Office Memorandum

TO : Robert Paine, Project Manager
Mn/DOT - District 5
Layout, Research and Development

DATE: April 17, 1978

FROM : Kenn Kopitzke, Acting Coordinator
Traffic Forecasts Section

PHONE: 6-6759

SUBJECT: SPAR M-202, S.P. 2789-01
I-394 - Third Avenue Distributor From
13th Street North to Washington Avenue

This is the first in a two part traffic forecast on I-394. SPAR 202 A on I-394 from T.H. 101 to the distributor will follow. The estimated 2000 A.D.T. and a.m. and p.m. peak hour volumes are enclosed, as well as heavy commercial and Sigma N-18 data. On the enclosed schematic are the second continuous 8 hour volume factors for the air study.

A .75% yearly growth factor can be used to factor traffic up to year 2005 and down to 1985. The average 8 hour peak on T.H. 12 using A.T.R. locations is 49.3 percent of the A.D.T. (the average highest 8 consecutive hours of the A.D.T.) The average three hour peak on T.H. 12 is 20.3% (average highest 3 consecutive hours of the A.D.T.). Enclosed are four 2000 flow maps of the Minneapolis C.B.D. with varying alternatives, a heavy commercial schematic and a distributor schematic.

The heavy commercial traffic was based on counts recorded in the area. The vehicle type distribution presented is for the year 2000. If vehicle type distributions are desired for 1985 or 2005, adjust these 2000 values by .75% per year.

The N-18 is for the twenty year period from 1985 to 2005. It reflects the legal limits of 18,000 pounds on a single axle and 32,000 pounds on a tandem. If values are desired for the legal limits of 20,000 and 34,000 pounds, multiply these numbers by a factor of 1.08.

The heavy commercial traffic from 6-7 a.m. is 3.2% of the total heavy commercial traffic in the average day. This applies to all segments. The heavy commercial traffic from 10-11 p.m. is 1.7% of the total heavy commercial traffic in the average day for the interstate segments, and 1.0% for all of the remaining segments.

The four alternatives on the 394 distributor schematic include the following:

- 1) T.H. 394 build with parking garages
- 2) T.H. 394 build with no parking garages
- 3) "No build" T.H. 394 with parking garages
(3rd and 4th Street connectors and I-94 in)
- 4) "No build" T.H. 394 with no parking garages
(3rd and 4th Street connectors and I-94 in)

Robert Paine
March 17, 1978
Page Two

The information presented in the report is based on the following

- 1) 2000 on 1990 alternate 1C Metro Network (1978)
- 2) 1977 cordon count and Minneapolis CBD flow map
- 3) 1972-1976 Mn/DOT Traffic Counts
- 4) On Sight Inspection
- 5) SPAR M-150 (layout provided)
- 6) 2000 p.m. peak hour volumes (computer assignment)

If any questions arise, feel free to contact myself or Mark Levenson at 296-1627.

cc: Jim Woodruff
Craig Robinson
C. J. Hoffstedt

79-9

Traffic Forecast

SPAR M-202DESIGN OR FORECAST YEAR 2000

T.H.(s): 394

S.P.:

County: Hennepin

Location: 13th Street North to Washington Avenue

Remarks:

| | VEHICLE TYPE | SEGMENT NUMBER | | | | | | | | | | |
|------------------|-------------------------------------------|----------------|------|-------|-------|------|------|-----|-------|-----|-----|-------|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| SINGLE-UNIT VEH. | Cars & 4-tire trucks | 20954 | 6764 | 14190 | 11958 | 3466 | 2414 | 332 | 10524 | 190 | 382 | 11908 |
| | 2-axle dual-tire trucks | 460 | 112 | 348 | 200 | 62 | 40 | 8 | 180 | 4 | 8 | 200 |
| | 3 axles or more | 156 | 34 | 122 | 64 | 18 | 12 | 2 | 56 | 2 | 2 | 64 |
| COMBINATIONS | 3- & 4-axle semis | 246 | 56 | 190 | 82 | 26 | 18 | 4 | 74 | - | 4 | 82 |
| | 5- (or more) axle semi | 68 | 14 | 54 | 56 | 14 | 8 | 2 | 34 | 2 | 2 | 56 |
| | Twin trailers | - | - | - | - | - | - | - | - | - | - | - |
| | Buses & truck-trailers | 116 | 20 | 96 | 40 | 14 | 8 | 2 | 32 | 2 | 2 | 40 |
| | AADT | 22000 | 7000 | 15000 | 12400 | 3600 | 2500 | 350 | 10900 | 200 | 400 | 12350 |
| | HCAADT | 1046 | 236 | 810 | 442 | 134 | 86 | 18 | 376 | 10 | 18 | 442 |
| | DHV | | | | | | | | | | | |
| | DIRECTIONAL DISTRIBUTION | | | | | | | | | | | |
| | 20-yr. Σ N-18 in design lane (000) | 1695 | 585 | 1825 | 760 | 230 | 225 | 90 | 865 | 90 | 90 | 1045 |

NOTE: The Sigma N-18 data presented in this table apply to flexible pavement only.

Traffic Forecast

SPAR M-202DESIGN OR FORECAST YEAR 2000

T.H.(s): 394

S.P.:

County: Hennepin

Location: 13th Street North to Washington Avenue

Remarks:

| | VEHICLE TYPE | SEGMENT NUMBER | | | | | | | | | | |
|------------------|-------------------------------------------|----------------|------|-----|------|-----|-----|------|-------|------|------|------|
| | | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 |
| SINGLE-UNIT VEH. | Cars & 4-tire trucks | 8300 | 2414 | 190 | 3274 | 332 | 382 | 8442 | 9876 | 1292 | 1100 | 5194 |
| | 2-axle dual-tire trucks | 144 | 40 | 4 | 58 | 8 | 8 | 148 | 168 | 26 | 22 | 88 |
| | 3 axles or more | 46 | 12 | 2 | 18 | 2 | 2 | 46 | 54 | 8 | 8 | 30 |
| COMBINATIONS | 3- & 4-axle semis | 56 | 18 | - | 26 | 4 | 4 | 60 | 68 | 8 | 8 | 26 |
| | 5- (or more) axle semi | 28 | 8 | 2 | 12 | 2 | 2 | 28 | 50 | 8 | 6 | 42 |
| | Twin trailers | - | - | - | - | - | - | - | - | - | - | - |
| | Buses & truck-trailers | 26 | 8 | 2 | 12 | 2 | 2 | 26 | 34 | 8 | 6 | 20 |
| | AADT | 8600 | 2500 | 200 | 3400 | 350 | 400 | 8750 | 10250 | 1350 | 1150 | 5400 |
| | HCAADT | 300 | 86 | 10 | 126 | 18 | 18 | 308 | 374 | 58 | 50 | 206 |
| | DHV | | | | | | | | | | | |
| | DIRECTIONAL DISTRIBUTION | | | | | | | | | | | |
| | 20-yr. Σ N-18 in design lane (000) | 585 | 225 | 90 | 210 | 90 | 90 | 710 | 890 | 100 | 90 | 460 |

NOTE: The Sigma N-18 data presented in this table apply to flexible pavement only.

Traffic Forecast

SPAR M-202DESIGN OR FORECAST YEAR 2000

T.H.(s): 394

S.P.:

County: Hennepin

Location: 13th Street North to Washington Avenue

Remarks:

| | VEHICLE TYPE | SEGMENT NUMBER | | | | | | | | | | |
|------------------|-------------------------------------------|----------------|-----|----|------|------|-----|------|------|-----|------|------|
| | | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 |
| SINGLE-UNIT VEH. | Cars & 4-tire trucks | 572 | 764 | 48 | 2889 | 3676 | 190 | 1453 | 1574 | 591 | 1096 | 3866 |
| | 2-axle dual-tire trucks | 12 | 14 | 2 | 60 | 78 | 4 | 28 | 30 | 12 | 20 | 82 |
| | 3 axles or more | 4 | 6 | - | 20 | 24 | 2 | 12 | 14 | 6 | 10 | 26 |
| COMBINATIONS | 3- & 4-axle semis | 4 | 8 | - | 22 | 28 | - | 10 | 10 | 6 | 10 | 30 |
| | 5- (or more) axle semi | 4 | 4 | - | 16 | 20 | 2 | 10 | 10 | 4 | 6 | 20 |
| | Twin trailers | - | - | - | - | - | - | - | - | - | - | - |
| | Buses & truck-trailers | 4 | 4 | - | 18 | 24 | 2 | 12 | 12 | 6 | 8 | 26 |
| | AADT | 600 | 800 | 50 | 3025 | 3850 | 200 | 1525 | 1650 | 625 | 1150 | 4050 |
| | HCAADT | 28 | 36 | 2 | 136 | 174 | 10 | 72 | 76 | 34 | 54 | 184 |
| | DHV | | | | | | | | | | | |
| | DIRECTIONAL DISTRIBUTION | | | | | | | | | | | |
| | 20-yr. Σ N-18 in design lane (000) | 90 | 90 | 90 | 325 | 410 | 90 | 200 | 210 | 90 | 150 | 570 |

NOTE: The Sigma N-18 data presented in this table apply to flexible pavement only.

Traffic Forecast

SPAR M-202DESIGN OR FORECAST YEAR 2000

T.H.(s): 394

S.P.:

County: Hennepin

Location: 13th Street North to Washington Avenue

Remarks:

| | VEHICLE TYPE | SEGMENT NUMBER | | | | | | | | | | |
|------------------|-------------------------------------------|----------------|------|-------|------|------|------|------|------|-------|------|-----|
| | | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 |
| SINGLE-UNIT VEH. | Cars & 4-tire trucks | 2766 | 4000 | 10190 | 6483 | 7707 | 9076 | 1004 | 2800 | 10872 | 1021 | 98 |
| | 2-axle dual-tire trucks | 58 | - | 348 | 254 | 94 | 214 | 20 | 68 | 262 | 24 | 2 |
| | 3 axles or more | 20 | - | 122 | 88 | 34 | 64 | 8 | 20 | 76 | 8 | - |
| COMBINATIONS | 3- & 4-axle semis | 24 | - | 190 | 140 | 50 | 56 | 6 | 18 | 68 | 6 | - |
| | 5- (or more) axle semi | 14 | - | 54 | 40 | 14 | 84 | 6 | 26 | 104 | 10 | - |
| | Twin trailers | - | - | - | - | - | - | - | - | - | - | - |
| | Buses & truck-trailers | 18 | - | 96 | 70 | 26 | 56 | 6 | 18 | 68 | 6 | - |
| | AADT | 2900 | 4000 | 11000 | 7075 | 7925 | 9550 | 1050 | 2950 | 11450 | 1075 | 100 |
| | HCAADT | 134 | - | 810 | 592 | 218 | 474 | 46 | 150 | 578 | 54 | 2 |
| | DHV | | | | | | | | | | | |
| | DIRECTIONAL DISTRIBUTION | | | | | | | | | | | |
| | 20-yr. Σ N-18 in design lane (000) | 315 | 90 | 1815 | 1310 | 510 | 1160 | 135 | 410 | 1415 | 155 | 90 |

NOTE: The Sigma N-18 data presented in this table apply to flexible pavement only.

Traffic Forecast

SPAR M-202

DESIGN OR FORECAST YEAR 2000

T.H.(s): 394 S.P.:

County: Hennepin

Location: 13th Street North to Washington Avenue

Remarks:

| | VEHICLE TYPE | SEGMENT NUMBER | | | | | | | | | | |
|-------------------------------------------|-------------------------|----------------|-------|------|------|------|------|------|------|-----|-----|------|
| | | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 |
| SINGLE-UNIT VEHs. | Cars & 4-tire trucks | 4789 | 9949 | 8974 | 2236 | 1931 | 8669 | 3896 | 4773 | 288 | 829 | 4437 |
| | 2-axle dual-tire trucks | 104 | 240 | 216 | 50 | 40 | 206 | 92 | 114 | 6 | 20 | 106 |
| | 3 axles or more | 34 | 68 | 64 | 16 | 14 | 62 | 28 | 34 | 2 | 6 | 32 |
| COMBINATIONS | 3- & 4-axle semis | 36 | 62 | 54 | 12 | 18 | 60 | 26 | 34 | - | 6 | 32 |
| | 5- (or more) axle semi | 30 | 94 | 86 | 22 | 10 | 74 | 34 | 40 | 2 | 8 | 40 |
| | Twin trailers | - | - | - | - | - | - | - | - | - | - | - |
| | Buses & truck-trailers | 32 | 62 | 56 | 14 | 12 | 54 | 24 | 30 | 2 | 6 | 28 |
| | AADT | 5025 | 10475 | 9450 | 2350 | 2025 | 9125 | 4100 | 5025 | 300 | 875 | 4675 |
| | HCAADT | 236 | 526 | 476 | 114 | 94 | 456 | 204 | 252 | 12 | 46 | 238 |
| | DHV | | | | | | | | | | | |
| DIRECTIONAL DISTRIBUTION | | | | | | | | | | | | |
| 20-yr. Σ N-18 in design lane (000) | | 555 | 1275 | 1170 | 315 | 245 | 1105 | 355 | 440 | 90 | 120 | 400 |

NOTE: The Sigma N-18 data presented in this table apply to flexible pavement only.

Traffic Forecast

SPAR M-202

DESIGN OR FORECAST YEAR 2000

T.H.(s): 394 S.P.:

County: Hennepin

Location: 13th Street North to Washington Avenue

Remarks:

| | VEHICLE TYPE | SEGMENT NUMBER | | | | | | | | | | |
|-------------------------------------------|-------------------------|----------------|------|------|-----|------|------|------|------|------|------|------|
| | | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 |
| SINGLE-UNIT VEHs. | Cars & 4-tire trucks | 4562 | 5103 | 5270 | 497 | 5600 | 3148 | 4855 | 1707 | 2452 | 3707 | 2000 |
| | 2-axle dual-tire trucks | 106 | 120 | 126 | 12 | 132 | 64 | 158 | 94 | 68 | 94 | - |
| | 3 axles or more | 32 | 36 | 38 | 4 | 40 | 22 | 56 | 34 | 18 | 34 | - |
| COMBINATIONS | 3- & 4-axle semis | 36 | 42 | 38 | 4 | 46 | 30 | 80 | 50 | 16 | 50 | - |
| | 5- (or more) axle semi | 34 | 40 | 44 | 4 | 44 | 16 | 30 | 14 | 28 | 14 | - |
| | Twin trailers | - | - | - | - | - | - | - | - | - | - | - |
| | Buses & truck-trailers | 30 | 34 | 34 | 4 | 38 | 20 | 46 | 26 | 18 | 26 | - |
| | AADT | 4800 | 5375 | 5550 | 525 | 5900 | 3300 | 5225 | 1925 | 2600 | 3925 | 2000 |
| | HCAADT | 238 | 272 | 280 | 28 | 300 | 152 | 370 | 218 | 148 | 218 | - |
| | DHV | | | | | | | | | | | |
| DIRECTIONAL DISTRIBUTION | | | | | | | | | | | | |
| 20-yr. Σ N-18 in design lane (000) | | 405 | 465 | 490 | 90 | 520 | 395 | 420 | 350 | 185 | 355 | 90 |

NOTE: The Sigma N-18 data presented in this table apply to flexible pavement only.

Traffic Forecast

SPAR M-202

DESIGN OR FORECAST YEAR 2000

T.H.(s): 394

S.P.:

County: Hennepin

Location: 13th Street North to Washington Avenue

Remarks:

| | VEHICLE TYPE | SEGMENT NUMBER | | | | | | | | | | |
|-------------------------------------------|-------------------------|----------------|------|------|------|------|------|------|-----|------|------|------|
| | | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 |
| SINGLE-UNIT VEH. | Cars & 4-tire trucks | 4962 | 1521 | 6158 | 4032 | 2032 | 5094 | 7126 | 670 | 4318 | 1328 | 2315 |
| | 2-axle dual-tire trucks | 166 | 88 | 234 | 114 | 114 | 114 | 228 | 14 | 164 | 60 | 46 |
| | 3 axles or more | 58 | 30 | 82 | 40 | 40 | 36 | 76 | 4 | 56 | 14 | 16 |
| COMBINATIONS | 3- & 4-axle semis | 92 | 48 | 126 | 64 | 64 | 30 | 94 | 4 | 76 | 18 | 18 |
| | 5- (or more) axle semi | 26 | 14 | 36 | 18 | 18 | 42 | 60 | 4 | 40 | 10 | 14 |
| | Twin trailers | - | - | - | - | - | - | - | - | - | - | - |
| | Buses & truck-trailers | 46 | 24 | 64 | 32 | 32 | 34 | 66 | 4 | 46 | 20 | 16 |
| | AADT | 5350 | 1725 | 6700 | 4300 | 2300 | 5350 | 7650 | 700 | 4700 | 1450 | 2425 |
| | HCAADT | 388 | 204 | 542 | 268 | 268 | 256 | 524 | 30 | 382 | 122 | 110 |
| | DHV | | | | | | | | | | | |
| DIRECTIONAL DISTRIBUTION | | | | | | | | | | | | |
| 20-yr. Σ N-18 in design lane (000) | | 865 | 450 | 1210 | 665 | 655 | 620 | 880 | 90 | 975 | 295 | 270 |

NOTE: The Sigma N-18 data presented in this table apply to flexible pavement only.

Traffic Forecast

SPAR M-202

DESIGN OR FORECAST YEAR 2000

T.H.(s): 394

S.P.:

County: Hennepin

Location: 13th Street North to Washington Avenue

Remarks:

| | VEHICLE TYPE | SEGMENT NUMBER | | | | | | | | | | |
|-------------------------------------------|-------------------------|----------------|------|-------|-------|------|------|-----|------|-----|------|------|
| | | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 |
| SINGLE-UNIT VEH. | Cars & 4-tire trucks | 3869 | 3466 | 11024 | 12154 | 1645 | 6859 | 744 | 1645 | 670 | 6785 | 4023 |
| | 2-axle dual-tire trucks | 174 | 110 | 258 | 284 | 32 | 278 | 28 | 32 | 14 | 264 | 86 |
| | 3 axles or more | 42 | 30 | 82 | 90 | 12 | 84 | 8 | 12 | 4 | 80 | 26 |
| COMBINATIONS | 3- & 4-axle semis | 56 | 32 | 80 | 92 | 14 | 114 | 6 | 14 | 4 | 112 | 28 |
| | 5- (or more) axle semi | 28 | 26 | 186 | 204 | 10 | 58 | 8 | 10 | 4 | 54 | 34 |
| | Twin trailers | - | - | - | - | - | - | - | - | - | - | - |
| | Buses & truck-trailers | 56 | 36 | 70 | 76 | 12 | 82 | 6 | 12 | 4 | 80 | 28 |
| | AADT | 4225 | 3700 | 11700 | 12900 | 1725 | 7475 | 800 | 1725 | 700 | 7375 | 4225 |
| | HCAADT | 356 | 234 | 676 | 746 | 80 | 616 | 56 | 80 | 30 | 590 | 202 |
| | DHV | | | | | | | | | | | |
| DIRECTIONAL DISTRIBUTION | | | | | | | | | | | | |
| 20-yr. Σ N-18 in design lane (000) | | 785 | 265 | 1785 | 1965 | 190 | 1385 | 150 | 205 | 90 | 445 | 250 |

NOTE: The Sigma N-18 data presented in this table apply to flexible pavement only.

Traffic Forecast

SPAR M-202DESIGN OR FORECAST YEAR 2000

T.H.(s): 394

S.P.:

County: Hennepin

Location: 13th Street North to Washington Avenue

Remarks:

| | VEHICLE TYPE | SEGMENT NUMBER | | | | | | | | | | |
|------------------|-------------------------------------------|----------------|------|-----|-----|------|------|-----|------|-----|------|------|
| | | 100 | 101 | 102 | 103 | 104 | 105 | 106 | 107 | 108 | 109 | 110 |
| SINGLE-UNIT VEH. | Cars & 4-tire trucks | 3466 | 6428 | 458 | 362 | 6768 | 4364 | 362 | 2916 | 860 | 4276 | 2600 |
| | 2-axle dual-tire trucks | 110 | 276 | 22 | 18 | 404 | 260 | 18 | 124 | 34 | 182 | 148 |
| | 3 axles or more | 30 | 88 | 6 | 6 | 94 | 60 | 6 | 40 | 12 | 60 | 52 |
| COMBINATIONS | 3- & 4-axle semis | 32 | 124 | 6 | 6 | 136 | 88 | 6 | 54 | 14 | 84 | 86 |
| | 5- (or more) axle semi | 26 | 52 | 4 | 4 | 76 | 50 | 4 | 36 | 20 | 36 | 22 |
| | Twin trailers | - | - | - | - | - | - | - | - | - | - | - |
| | Buses & truck-trailers | 36 | 82 | 4 | 4 | 122 | 78 | 4 | 30 | 10 | 62 | 42 |
| | AADT | 3700 | 7050 | 500 | 400 | 7600 | 4900 | 400 | 3200 | 950 | 4700 | 2950 |
| | HCAADT | 234 | 622 | 42 | 38 | 832 | 536 | 38 | 284 | 90 | 424 | 350 |
| | DHV | | | | | | | | | | | |
| | DIRECTIONAL DISTRIBUTION | | | | | | | | | | | |
| | 20-yr. Σ N-18 in design lane (000) | 265 | 695 | 105 | 100 | 1820 | 1175 | 100 | 330 | 250 | 1070 | 870 |

NOTE: The Sigma N-18 data presented in this table apply to flexible pavement only.

Traffic Forecast

SPAR M-202DESIGN OR FORECAST YEAR 2000

T.H.(s): 394

S.P.:

County: Hennepin

Location: 13th Street North to Washington Avenue

Remarks:

| | VEHICLE TYPE | SEGMENT NUMBER | | | | | | | | | | |
|------------------|-------------------------------------------|----------------|-------|------|-----|-------|------|------|------|------|-----|-----|
| | | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 |
| SINGLE-UNIT VEH. | Cars & 4-tire trucks | 1645 | 13902 | 2666 | 288 | 12545 | 2000 | 1196 | 3196 | 2962 | 670 | 670 |
| | 2-axle dual-tire trucks | 32 | 372 | 60 | 6 | 346 | - | 68 | 68 | 166 | 12 | 12 |
| | 3 axles or more | 12 | 122 | 16 | 2 | 112 | - | 24 | 24 | 58 | 6 | 6 |
| COMBINATIONS | 3- & 4-axle semis | 14 | 142 | 14 | - | 128 | - | 34 | 34 | 92 | 6 | 6 |
| | 5- (or more) axle semi | 10 | 208 | 26 | 2 | 200 | - | 10 | 10 | 26 | 4 | 4 |
| | Twin trailers | - | - | - | - | - | - | - | - | - | - | - |
| | Buses & truck-trailers | 12 | 104 | 18 | 2 | 94 | - | 18 | 18 | 46 | 2 | 2 |
| | AADT | 1725 | 14850 | 2800 | 300 | 12425 | 2000 | 1350 | 3350 | 3350 | 700 | 700 |
| | HCAADT | 80 | 948 | 134 | 12 | 880 | - | 154 | 154 | 388 | 30 | 30 |
| | DHV | | | | | | | | | | | |
| | DIRECTIONAL DISTRIBUTION | | | | | | | | | | | |
| | 20-yr. Σ N-18 in design lane (000) | 210 | 800 | 165 | 90 | 1610 | 90 | 350 | 355 | 860 | 90 | 90 |

NOTE: The Sigma N-18 data presented in this table apply to flexible pavement only.

Traffic Forecast

SPAR M-202DESIGN OR FORECAST YEAR 2000

T.H.(s): 394

S.P.:

County: Hennepin

Location: 13th Street North to Washington Avenue

Remarks:

| | VEHICLE TYPE | SEGMENT NUMBER | | | | | | | | | | |
|------------------|-------------------------------------------|----------------|-------|------|------|------|------|-------|------|-----|------|-------|
| | | 111 | 112 | 113 | 114 | 115 | 116 | 117 | 118 | 119 | 120 | 121 |
| SINGLE-UNIT VEH. | Cars & 4-tire trucks | 7916 | 9770 | 1108 | 2945 | 950 | 8308 | 10119 | 1457 | 558 | 2902 | 13350 |
| | 2-axle dual-tire trucks | 406 | 564 | 66 | 120 | 36 | 422 | 524 | 26 | 20 | 64 | 352 |
| | 3 axles or more | 108 | 152 | 22 | 40 | 12 | 114 | 138 | 8 | 6 | 20 | 114 |
| COMBINATIONS | 3- & 4-axle semis | 160 | 230 | 28 | 54 | 22 | 178 | 212 | 10 | 4 | 18 | 126 |
| | 5- (or more) axle semi | 78 | 114 | 12 | 36 | 20 | 92 | 118 | 16 | 6 | 26 | 214 |
| | Twin trailers | - | - | - | - | - | - | - | - | - | - | - |
| | Buses & truck-trailers | 132 | 170 | 14 | 30 | 10 | 136 | 164 | 8 | 6 | 20 | 94 |
| | AADT | 8800 | 11000 | 1250 | 3225 | 1050 | 9250 | 11275 | 1525 | 600 | 3050 | 14250 |
| | HCAADT | 884 | 1230 | 142 | 280 | 100 | 942 | 1156 | 68 | 42 | 148 | 900 |
| | DHV | | | | | | | | | | | |
| | DIRECTIONAL DISTRIBUTION | | | | | | | | | | | |
| | 20-yr. Σ N-18 in design lane (000) | 1960 | 2725 | 365 | 330 | 280 | 2105 | 2590 | 195 | 105 | 180 | 1150 |

NOTE: The Sigma N-18 data presented in this table apply to flexible pavement only.

Traffic Forecast

SPAR M-202DESIGN OR FORECAST YEAR 2000

T.H.(s): 394

S.P.:

County: Hennepin

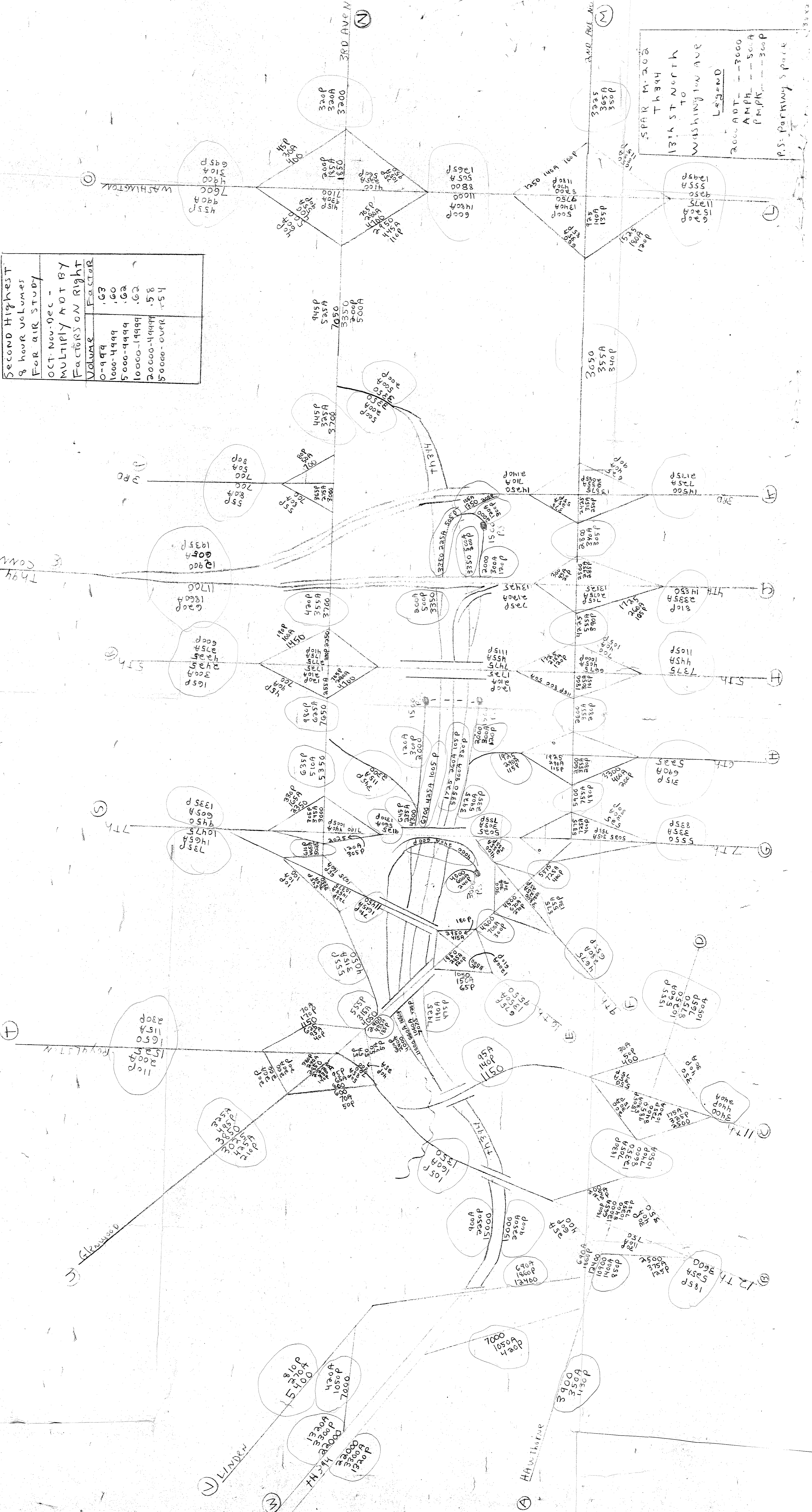
Location: 13th Street North to Washington Avenue

Remarks:

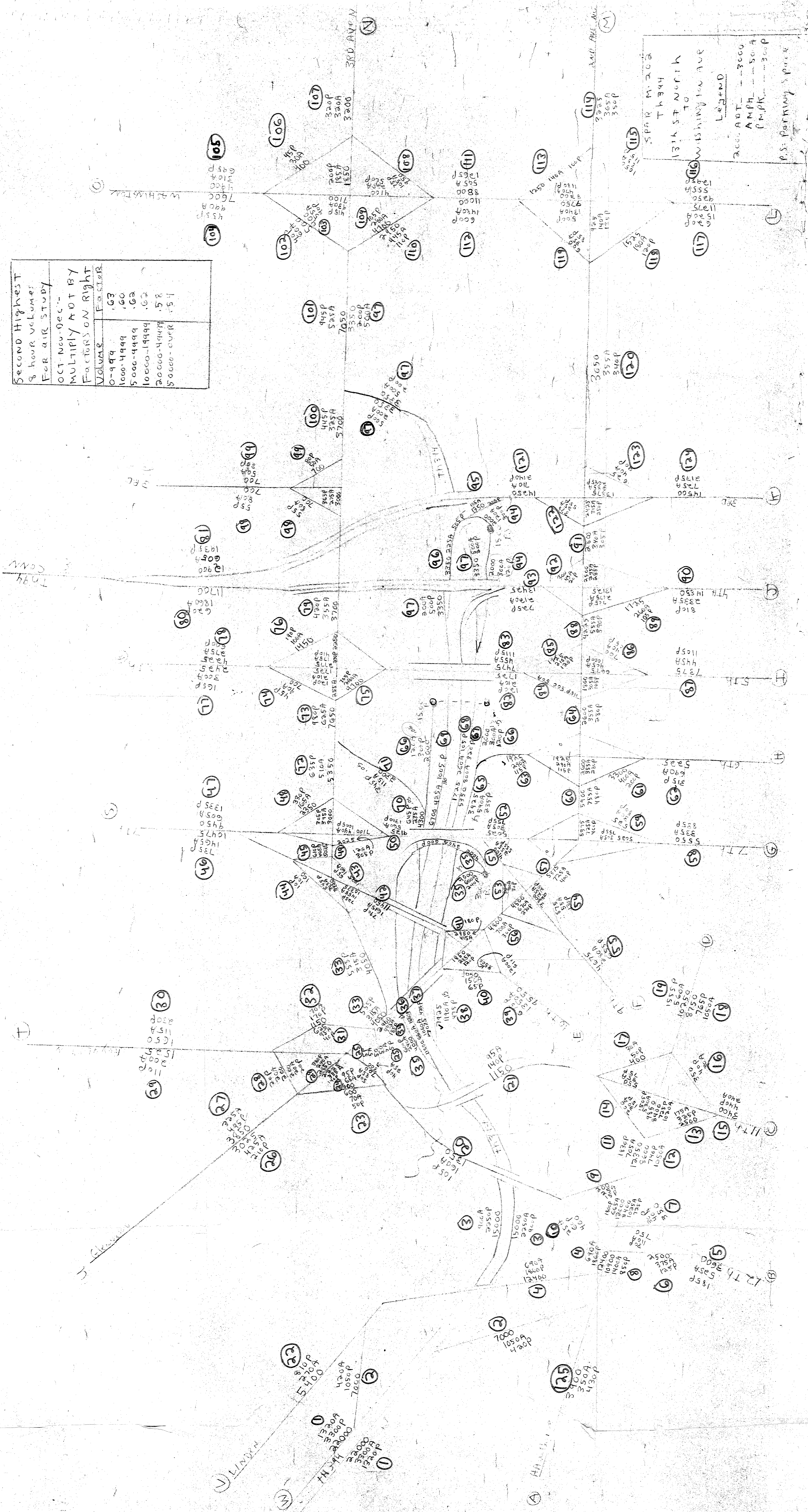
| | VEHICLE TYPE | SEGMENT NUMBER | | | | | | | | | | |
|------------------|-------------------------------------------|----------------|-----|-------|------|--|--|--|--|--|--|--|
| | | 122 | 123 | 124 | 125 | | | | | | | |
| SINGLE-UNIT VEH. | Cars & 4-tire trucks | 359 | 595 | 13586 | 3760 | | | | | | | |
| | 2-axle dual-tire trucks | 8 | 12 | 356 | 68 | | | | | | | |
| | 3 axles or more | 2 | 6 | 118 | 22 | | | | | | | |
| COMBINATIONS | 3- & 4-axle semis | - | 4 | 130 | 18 | | | | | | | |
| | 5- (or more) axle semi | 4 | 4 | 214 | 20 | | | | | | | |
| | Twin trailers | - | - | - | - | | | | | | | |
| | Buses & truck-trailers | 2 | 4 | 96 | 12 | | | | | | | |
| | AADT | 375 | 625 | 14500 | 3900 | | | | | | | |
| | HCAADT | 16 | 30 | 914 | 140 | | | | | | | |
| | DHV | | | | | | | | | | | |
| | DIRECTIONAL DISTRIBUTION | | | | | | | | | | | |
| | 20-yr. Σ N-18 in design lane (000) | 90 | 90 | 960 | 195 | | | | | | | |

NOTE: The Sigma N-18 data presented in this table apply to flexible pavement only.

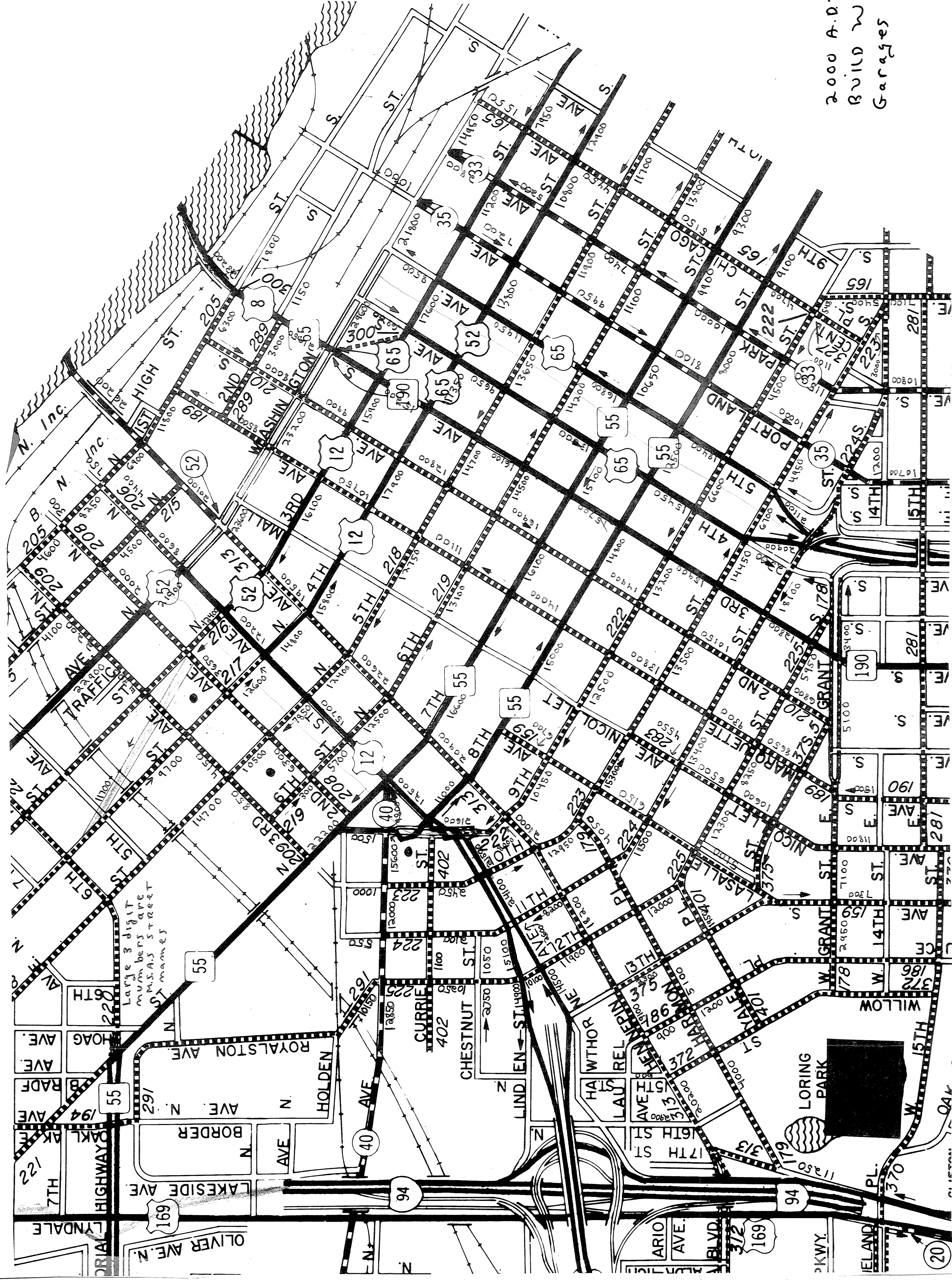
| Second Highest 8 hour volumes For air study | | |
|--------------------------------------------------------|--------|--|
| OCT. NOV. DEC. - MULTIPLY ADT BY FACTOR ON RIGHT | | |
| VOLUME | FACTOR | |
| 0-999 | .63 | |
| 1000-4999 | .60 | |
| 5000-9999 | .62 | |
| 10000-19999 | .62 | |
| 20000-49999 | .58 | |
| 50000-over | .54 | |

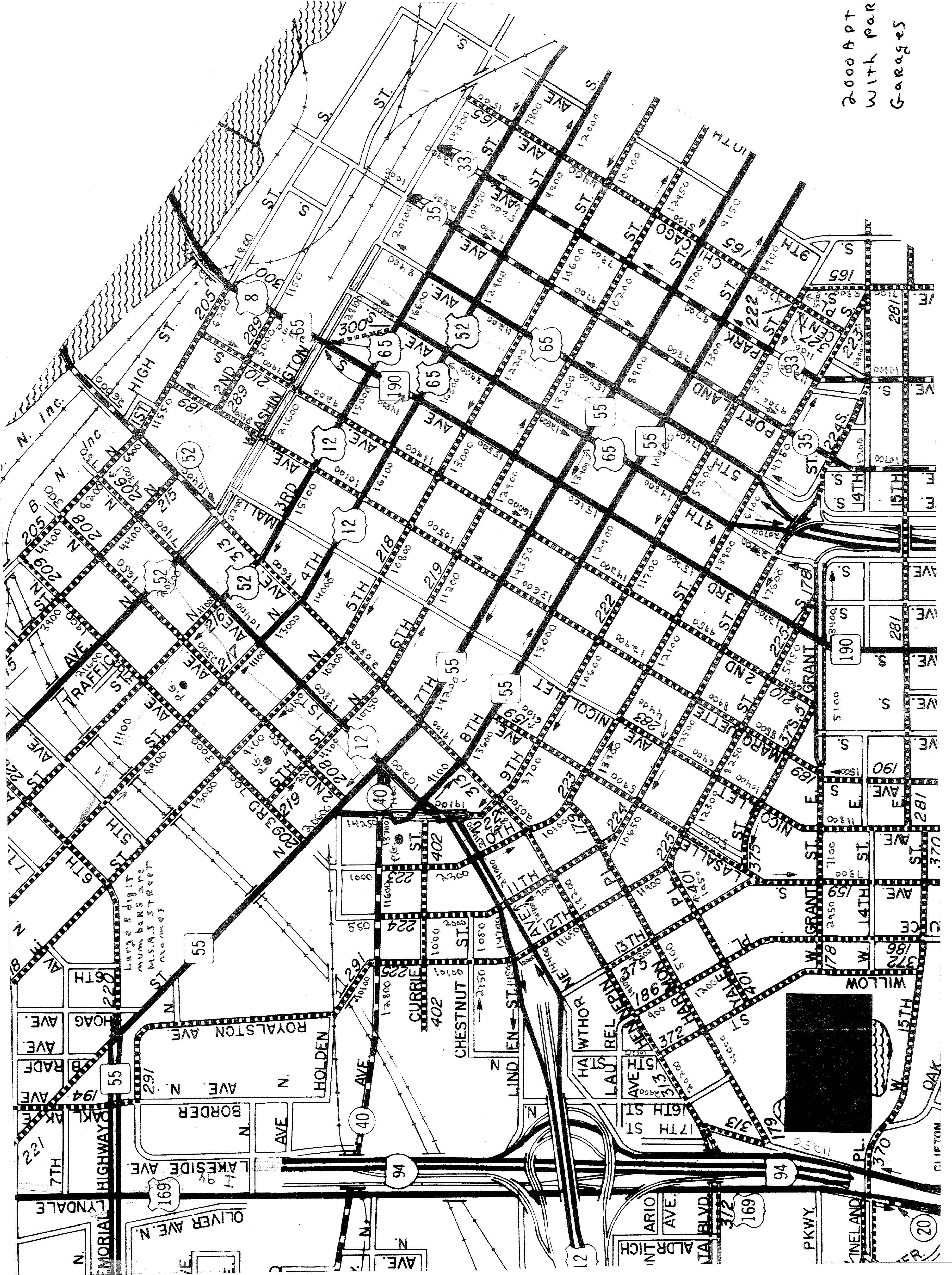


| | Factor |
|---------------------------------------------------|--------|
| Second Highest 8 hour volumes For air study | Factor |
| OCT-Nov-Dec - BY FACTORS ON RIGHT | Factor |
| Volume | |
| 0-999 | .63 |
| 1000-4999 | .60 |
| 5000-9999 | .62 |
| 10000-19999 | .62 |
| 20000-49999 | .58 |
| 50000-over | .54 |

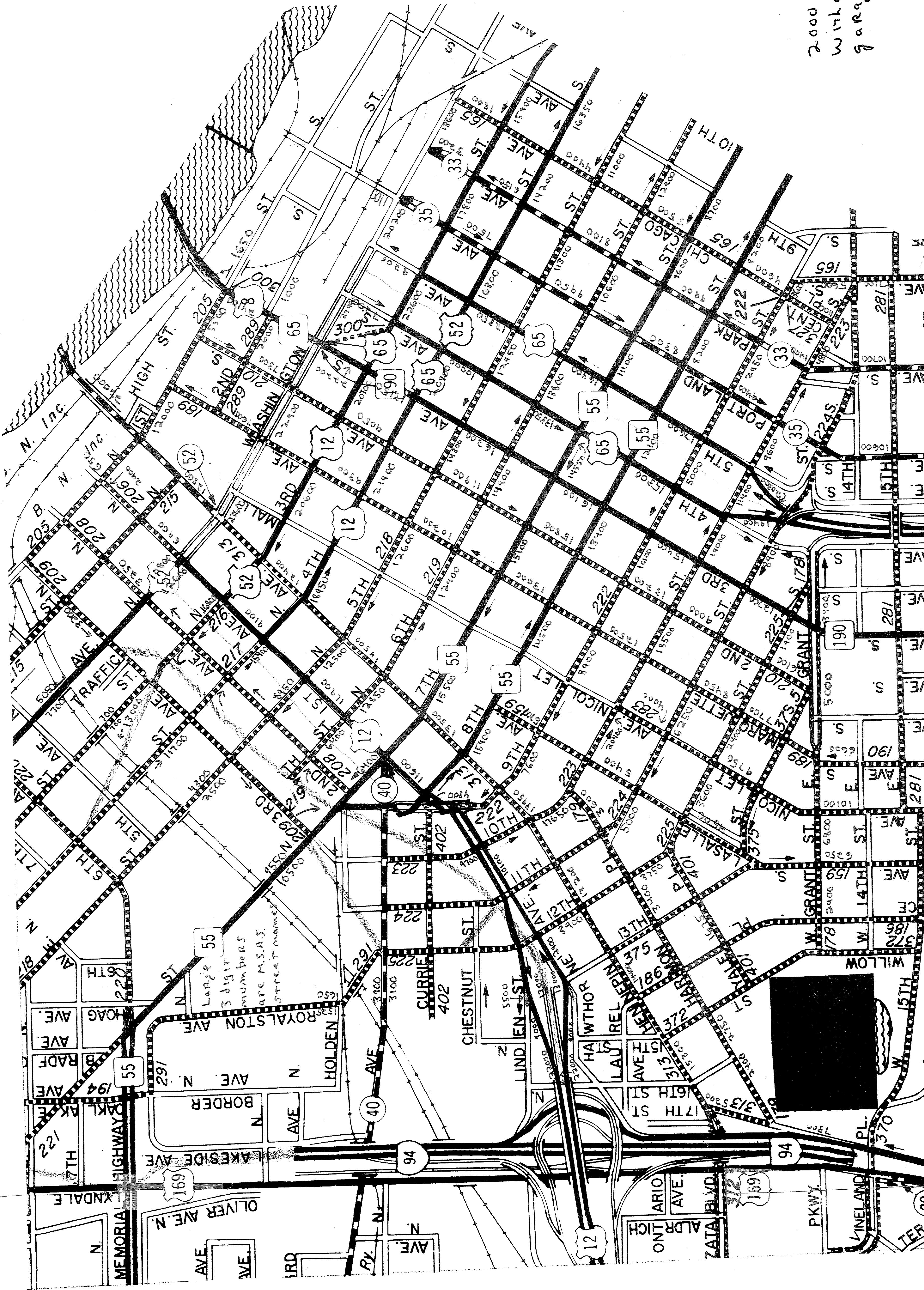


2000 A.D.T. 20
BUILD WITHOUT
Garages

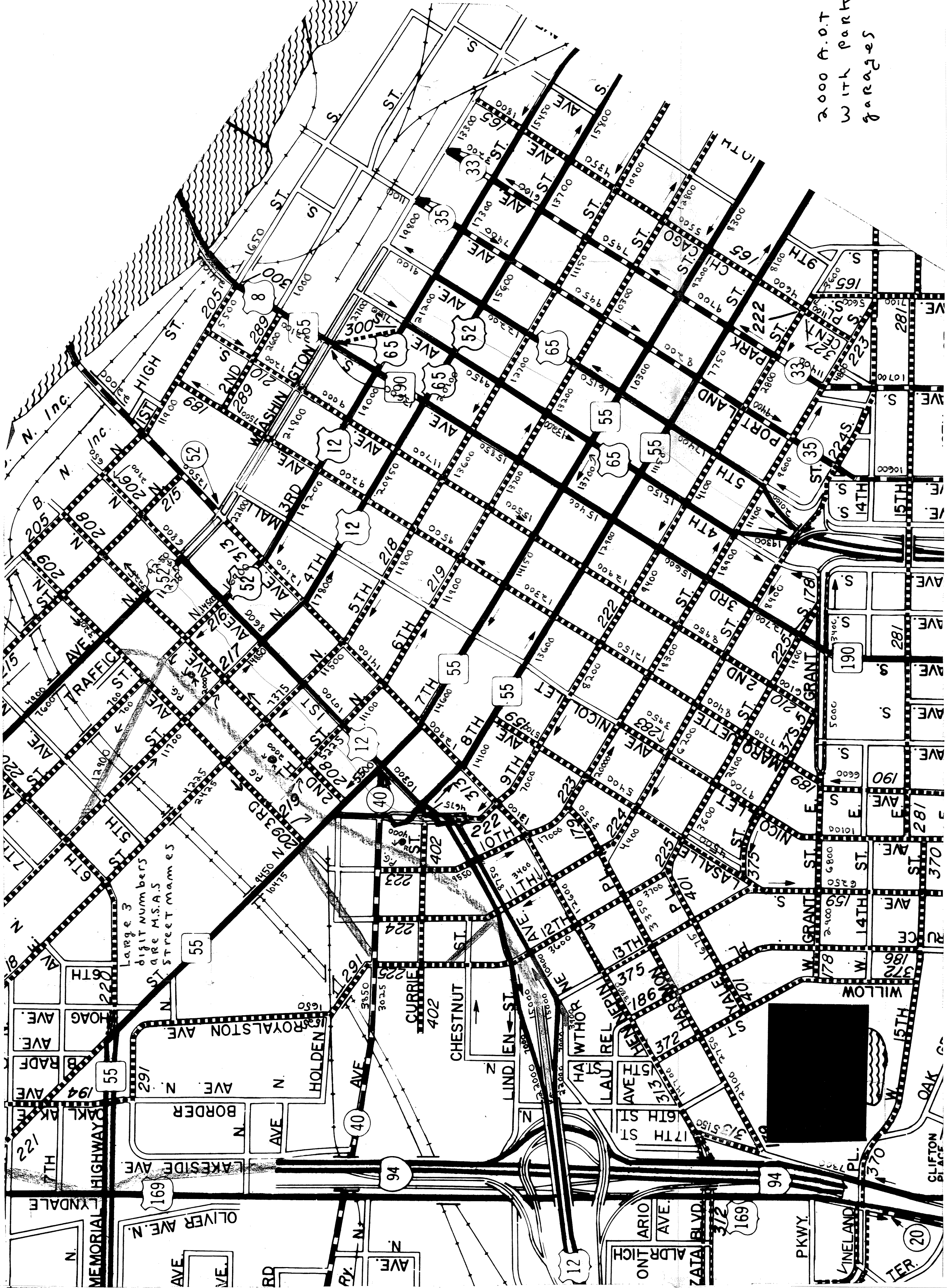




2000 APT NO BUILD
WITH PARKING
GARAGES



2000 A.D.T BUILD
WITHOUT PARKING
garages



2000 A.O.T BUILD
with parking
garages